

What is claimed is:

Sub. AI
1. A communications system that enables a first party to track the current and historical locations of a device carried by a second party, said device comprising:

a portable device to be carried by said second party, said device transmitting a first data signal having geographical coordinate data and device information data in response to one of a plurality of input signals;

a central control system having at least one wireless receiver/transmitter for receiving said first data signal from said portable device;

first means for periodically generating one of said plurality of input signals to enable said central control system to receive a plurality of first data signals over time, which plurality enables said central control system to store history data relating to any geographical movement of said second party;

second means for enabling said first party to interrogate said central control system to determine the present geographic coordinates of said second party, and to review said history data relating to the prior geographical movements of said second party.

2. The system according to claim 1, wherein said portable device further comprises at least one

a
means for enabling said second party to manually generate ~~one~~ at least one of said plurality of input signals.

3. The system according to claim 2 wherein, said means for enabling said second party to manually generate at least one of said plurality of input signals is a manual emergency button and said data signal includes a data value which indicates an emergency status.

4. The system according to claim 1, wherein said first means is an internal clock in said portable device which triggers said data signals on a predefined periodic basis.

5. The system according to claim 4, wherein said internal clock further enables time stamping of said GPS geographical coordinate data at the time of receipt and said data signal includes a time stamp corresponding to said geographical coordinate data.

6. The system according to claim 1, wherein said first means is a timer in said control system which triggers said data signals on a predefined periodic basis.

7. The system according to claim 6, wherein said control system further remotely triggers automatic transmission of said first data signal on a periodic basis.

8. The system according to claim 1, wherein said control system further comprises a database for

storing and correlating said history data and said device information data.

9. The system according to claim 1, wherein said control system further comprises a third means for converting said geographic coordinate data into a plurality of location references recognizable to said first party.

10. The system according to claim 9, wherein said location reference recognizable to said first party is a graphical display of a map of an area surrounding the most current location of said portable device.

11. The system according to claim 9, wherein said plurality of location references is a table of current and historical locations of said device.

12. The system according to claim 11, wherein said table of current and historical locations references coordinates of a printed map previously provided to said first party.

13. The system according to claim 1, wherein said central control system further includes means to generate an alert and auto-notification signal for automatically notifying said first party when said geographic coordinate data indicates a current location which exceeds a predefined criteria.

14. The system according to claim 13, wherein said central control system further includes a

customer profile database for storing and updating said predefined notification criteria and procedures whereby said means to generate an alert and auto-notification signal cross references records in said customer profile database for determining alert criteria and procedures.

15. The system according to claim 3, wherein said central control system further includes means to invoke predefined procedures and notify emergency authorities when said data value indicating an emergency is received by said control system.

16. The system according to claim 1, wherein said central control system further includes a user access validation means for verifying the identity of said first party prior to transmission of said current and historical locations of said second party.

17. The system according to claim 1, wherein said second means includes an internet web server, whereby a person having authorized access to said web server may obtain current geographic coordinates and history data of said second party.

18. The system according to claim 17, wherein said web server further includes a graphical user interface having a web page with a plurality of selection options to enable said first party to selectively request and view the current and historical locations of said portable device, and to

cause said central control system to remotely trigger transmission of a first data signal from said device.


19. The system according to claim 1, wherein said second means includes a manned call which provides services in response to a telephone call from said first party, said call center further including a database of a plurality of first data signals over time, and a report generator means for accessing said database and providing said call center and said first party with said device's current and historical locations.

20. The system according to claim 1, wherein said second means further comprises a voice telephone connection, via a web server and internet telephony, between said first party and a call center agent who can provide said present geographic coordinates of said device and said second party, and said history data related to prior geographic movements of said second party.

21. The system according to claim 1, wherein said second means further comprises a voice response unit (VRU) processing system which generates automated audible data relating to said present geographic coordinates of said device and said second party, and said history data related to prior geographic movements of said second party.

22. The system according to claim 1, wherein said system includes a plurality of

receivers/transmitters, each of which separately communicate with said central control system.

Sub. A2  23. A method of providing information to a first party on a location of a second party, said method using a communications system for tracking current and historical locations, said method comprising steps of:

receiving broadcast signal transmissions from a geographical locator system with a portable device carried by said second party;

converting said signal transmissions into location data;

periodically transmitting said location data and an identifying code via said communications system from said portable device to a central control system in response to one of a plurality of portable device input signals;

storing said location data and said identifying codes in a data base to enable subsequent queries on said location data to determine any geographical movements of said second party; and

providing a user interface to enable access to said location data by said first party.

30 24. The method according to claim *19* 23, wherein said first three steps of receiving, converting, and transmitting are periodically triggered by a first one of said plurality of input signals by a clock timer in said portable device.

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~~30.~~ The method according to claim ²⁷~~28.~~
further comprising steps of:

creating a profile for said second person,
said profile including predefined procedures;

performing predefined procedures specified
in a customer profile upon receipt of said emergency
code by said central control system, said procedures
including an automatic notification of said first
party.

²⁷
~~31.~~ The method according to claim ¹⁹~~23.~~
further comprising the step of authenticating an
access authorization for verifying a first party's
request for location data.

32. The method according to claim 23, which
further comprises the steps of:

providing a communications link between said
central control system and a web server;

storing graphical displays of maps of
geographic locations surrounding each of said
receiver/transmitters in said web server; and

downloading a graphical display of a map of
an area surrounding a current location, and the
geographical coordinates of the current location in
response to a query by said first party.

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~~33.~~ The method according to claim ²⁹~~32.~~
further comprising steps of:

defining one or more selection areas on a
web page downloaded by said web server, each of said

selection areas linked to said central control system, generating a third one of said plurality of control signals in response to a first party's selection of a first of said selection links in said web page.

34. The method according to claim 23, further comprising steps of:

linking an operator call center with said central control center to enable servicing of telephone inquiries from first parties, said servicing further comprising steps of,

accessing location data stored in said data base in said central control system;

providing said accessed location data to said first parties, and

triggering an automatic transmission of said device's location if a request for automatic update is made by said first party.

30 35. The method according to claim 34, wherein said servicing further comprises the step of

notifying a predefined authority in response to an emergency.

31 36. The method according to claim 34, wherein said servicing step further comprises the step of notifying a predefined person when location data transmitted by said device indicates a location beyond a pre-specified threshold of movement.

32 37. The system as in claim 1, wherein said

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